

**CLAIMS**

1. A location signalling device comprising a wing  
balloon for signalling a location, and a tether line fixed  
5 at its distal end to said wing balloon and in use at its  
proximal end fixed to said location; said wing balloon  
comprising an inflatable aerodynamically shaped hollow body  
to be at least partly be filled with a lighter than air-gas  
and having a wing attack surface for air flowing relative  
10 to said wing balloon such that floating aloft of said wing  
balloon is supported by said air flow, **characterized** in  
that when said body is inflated:

said wing balloon having a flexible wing portion,  
whereby said attack surface of said wing balloon is  
15 passively variable,

wherein said attack surface has a maximum at absent  
relative air-flow, and wherein said flexible wing portion  
being arranged such that increasing relative air-flow in  
use of said wing balloon passively decreases the lift  
20 generating surface of said wing balloon and vice versa.

2. Location signalling device according to claim 1,  
wherein said wing balloon aerodynamic shape is a generally  
arrow-shaped.

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3. Location signalling device according to claim 1 or  
2, wherein said flexible wing portion comprises adjacent  
inflated and non-inflated chambers, said inflated chambers  
being connected to each through conduits in said non-  
30 inflated chambers.

4. Location signalling device according to claims 1 to 3, wherein said flexible wing portion is made of a resilient material.

5           5. Location signalling device according to claims 1 to 4, said tether line having a length of 30 m.

6. Location signalling device according to claims 1 to 5, said wing balloon comprising at least one radar reflecting surface.

7. Location signalling device according to claim 6, wherein said radar reflecting surface is a radar reflective tail attached to said wing balloon.

15           8. Location signalling device according to claims 1 to 7, said wing balloon having a highly visible colour.

9. Location signalling device according to claims 1 to 8, said wing balloon having a smoke generating means.

10. Location signalling device according to claims 1 to 9, said wing balloon having a chemical heat generating means.

25           11. Location signalling device according to claims 1 to 10, wherein said wing balloon is made of a water repellent material.

12. Location signalling device according to claims 1 to 11 having means for converting relative airflow to a reciprocating motion of said wing balloon.

5        13. Location signalling device according to claims 1 to 12 being a location signalling device for search and rescue of people in emergency.

10        14. Location signalling device according to claims 1 to 12 being a location signalling device for locating equipment.

15        15. A method of generally keeping static the dragging force on a tether line of a location signalling device comprising a wing balloon for signalling a location, and a tether line fixed at its distal end to said wing balloon and in use at its proximal end fixed to said location; said wing balloon comprising an inflatable aerodynamically shaped hollow body to be at least partly be filled with a  
20 lighter than air-gas and having a wing attack surface for air flowing relative to said wing balloon such that floating aloft of said wing balloon is supported by said air flow, **characterized by**

25        when said wing balloon being inflated having a flexible wing portion,

passively varying the attack surface of said wing balloon by said airflow, wherein said attack surface has a maximum at absent relative air-flow, and wherein said flexible wing portion being arranged such that increasing  
30 air-flow in use of said wing balloon passively decreases

the lift generating surface of said wing balloon and vice versa.